PHASE I ENVIRONMENTAL SITE ASSESSMENT

Former Lynchburg Foundry Company Storage Building
1800 Garnet St., Lynchburg, Virginia

PREPARED FOR:

City of Lynchburg Economic Development Authority and
United States Environmental Protection Agency
USEPA Brownfields Assessment Grant Number: # BF-96359401-0

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Draper Aden Associates
Engineering • Surveying • Environmental Services

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EXECUTIVE SUMMARY

The City of Lynchburg's Economic Development Authority (EDA) contracted Draper Aden Associates under the EDA's recently awarded USEPA brownfields grant to perform a Phase I Environmental Site Assessment (ESA) for the former Lynchburg Foundry Company storage building located at1800 Garnet Street in Lynchburg, Virginia. Draper Aden Associates performed the Phase I ESA in general accordance with the scope and limitations of the ASTM International (ASTM) Practice E1527-13 and the USEPA All Appropriate Inquiry Rule in an effort to identify recognized environmental conditions (RECs) as defined by the ASTM standard. A lead-based paint and asbestos containing materials survey was also conducted and the report will be submitted under separate cover.

The subject property, owned by the City of Lynchburg, includes approximately 0.29 acres of land with a vacant 35,440-square foot four-story (including basement) former warehouse building. The building is situated on approximately half of the parcel, while the remainder of the property is cleared, undeveloped land. The building was constructed around 1919 with some interior and exterior modifications and expansions over time. The building was formerly used by the Lynchburg Foundry and was identified primarily as a warehouse, office space, and bath house under its Foundry use and other commercial and warehousing activities during post-Foundry operation.

The subject property is located in an area of mixed use including industrial, railroad and residential properties. The site is bounded by active CSX railroad tracks running along the northern boundary and active Norfolk Southern railroad tracks along the southern boundary of the property, both of which have been in use for over 50 years. A portion of the building appears to be located on railroad property and the southern building wall serves as a retaining structure to the railroad line. Draper Aden Associates conducted the site reconnaissance on January 15, 2020. Observations of the site exterior were limited by vegetative overgrowth in select areas. No evidence of a release or obvious impact to the subject property was observed during the site reconnaissance.

This assessment revealed evidence of Recognized Environmental Conditions (RECs) from both on- and off-site sources. RECs include likely impact to soil, groundwater, and vapor from known petroleum releases as well as potential for likely undocumented releases or improper disposal on site. Fill from unknown sources may also be present. Surface and particulate migration of PCBs or other constituents of concern from the railroad and other nearby activities may also be contributing sources of impact associated with RECs although no documented releases were identified as part of this assessment. Further discussion regarding RECs, historical RECs, areas of concern and *de minimis* conditions, data gaps, and associated findings and opinions are provided in the body of this report.

1.0 INTRODUCTION

Draper Aden Associates was contracted by the City of Lynchburg's Economic Development Authority (EDA) to perform a Phase I Environmental Site Assessment (ESA) for an approximately 0.29-acre property located at 1800 Garnet Street in Lynchburg, Virginia.

Draper Aden Associates performed this Phase I ESA in general accordance with the scope and limitations of the ASTM E1527-13: *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process* and the United States Environmental Protection Agency (USEPA) All Appropriate Inquiry (AAI) Rule. The Phase I ESA included site reconnaissance, interviews with the property owner and local government officials, as well as a review of practicably reviewable and reasonably ascertainable historical records and records of local, state and federal regulatory agencies, unless noted. Additional Virginia Department of Environmental Quality (VDEQ) file review was conducted as part of this assessment.

The subject property, adjoining properties, and surrounding/vicinity properties are depicted in **Figures 1**, **2** and **3**. Photographs of the site at the time of the site reconnaissance are presented in **Appendix A**. Historical records review documentation is presented in **Appendix B**. Regulatory review documentation is provided in **Appendix C**. Qualifications of project environmental professionals are presented in **Appendix D**. A review for controlled substances as defined by ASTM was not conducted by Draper Aden Associates. The results of the Phase I ESA are provided below.

1.1 Purpose

A Phase I ESA is intended to identify recognized environmental conditions (RECs) on a site, as defined in Section 3.2.78 of the ASTM standard, through a review of practicably reviewable and reasonably ascertainable information about the site, including a site reconnaissance, to satisfy one of the requirements to qualify for the landowner liability protections, that being the practice that constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" (42 USC §9601(35)(B)) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The term REC means the presence or likely presence of hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment, (2) under conditions indicative of a release to the environment, or (3) under conditions that pose a material threat of a future release to the environment. If RECs are identified, the Phase I ESA report may indicate what additional activity is warranted to further evaluate the environmental conditions. The EDA intends to use the results of the Phase I ESA to help facilitate redevelopment of the property.

Draper Aden Associates prepared this document in accordance with generally accepted standards of environmental practice and in general accordance with the scope and limitations of the ASTM standard. The conclusions presented in this report are professional opinions based on

data described in this report, and are intended only for the purpose, site location, and project indicated. The conclusions presented in this report are based on the assumption that site conditions do not deviate from those observed during the study and described in this report.

This report is not an exhaustive study of potential environmental impact at the subject property and should not be interpreted as such. An evaluation of subsurface soil and groundwater conditions, vapor intrusion, radon, wetlands assessment, historical building assessment or other evaluation of environmental issues considered a business environmental risk as defined by ASTM were not performed as part of this assessment, unless specifically noted. An environmental lien search was not included in the scope of services, unless noted.

A vapor intrusion survey was outside the scope of services; however, Draper Aden Associates considered the potential for vapor encroachment (ASTM E2600-15) as part of this assessment. A vapor encroachment condition (VEC) as defined by the standard is the presence or likely presence of chemical(s) of concern (COC) vapors in the subsurface of a target property caused by the release of vapors from impacted soil or groundwater either on or near the subject property. COCs include any chemical that is present in the subsurface environment that can potentially migrate as a vapor into the subsurface of the target property (e.g., petroleum compounds); however, COCs do not include naturally occurring gases such as radon associated with certain types of subsurface geology.

The results of this assessment represent a review of current ("current" in the context of this report refers to the date of the site visit) conditions based on practicably reviewable and reasonably ascertainable information and limited observations. Exceptions to, or deletions from, this practice are described in **Section 8.0** of this report. A finding of RECs does not imply that an impact actually exists, but that more information may be warranted.

2.0 PROPERTY DESCRIPTION

2.1 Location, Legal Description

The approximately 0.29-acre subject property is located at 1800 Garnet Street in Lynchburg, Virginia, Parcel ID 0472003. A Site Location Map is presented as **Figure 1**. Based on the City of Lynchburg's ParcelViewer, the subject property is owned by the City of Lynchburg.

2.2 Site and Vicinity Characteristics

The subject property is located within the corporate limits of the City of Lynchburg, Virginia. The site and vicinity characteristics are presented on **Figures 2** and **3**. The approximately 0.29-acre, irregular-shaped parcel is covered primarily by a building with a narrow, cleared area on the southeastern portion of the property. The shape of the property is a thin strip of land running from northwest to southeast and whose northern and southern borders are the longest portions of the property. The site is bordered by CSX railroad tracks along the northern boundary and Norfolk Southern railroad tracks along the southern boundary. Property development in the vicinity of the site is a mix of industrial, residential, and railroad properties. Topographically, the site slopes northeast, and its western edge is the highest elevation. Garnet St. is north of the subject property. The southern wall of the building also serves as a retaining feature for the Norfolk Southern railroad track adjacent to the site. The James River is approximately 500 feet to the east.

2.3 Current Use of the Property

Observations indicate that the property is currently vacant, although material and debris, such as metal ducts, window screens, and food wrappers, are present on site. Some vandalism and potential unauthorized temporary residence was also observed.

2.4 Description of Structures, Roads, Other Improvements on the Site

The subject property includes an approximate 35,440 square foot former mixed-use office, warehouse, and bath building which covers approximately 0.15 acres of the site (approximately half of the total parcel area of 0.288 acres). Based on historical documents reviewed, the building was constructed in 1920, dating it at 100 years old. The building is 4 stories, is brick construction, and has a penthouse mechanical room (not included in the 4 stories). A loading dock is located at the northeast boundary of the building facing towards the James River. The building's main entrance door is locked; however, open doorways and windows as a result of vandalism allow access into the building. The site is otherwise unrestricted. The property is at the corner of Garnet Street as shown in **Figure 2**.

This area of Lynchburg is serviced by public water, sewer, and electricity. Electrical and water utility structures were visible adjacent to and near the site. The City of Lynchburg's ParcelViewer

showed that a sewer utility line is within the property boundaries and runs across the northernmost end of the property and under the building. A water main runs beneath Garnet Street and East Lynch Street immediately adjacent to the property, and a fire hydrant is located within a couple feet of the property and building. A stormwater gravity main also runs along the property's northern border between the property boundary and the railroad tracks. No information was found regarding historical utilities, although oil tanks were depicted on historical mapping (See **Section 4**).

2.5 Current Uses of the Adjoining Properties and Surrounding Properties

Current Uses of Adjacent Properties

The properties immediately surrounding the subject property are city-owned parcel and railroad property. **Figure 2** depicts adjacent properties and current adjacent property uses are detailed below:

North and East

- An active railroad line (CSX Railroad, current) runs along the northeast boundary. The intersection of East Lynch Street and Garnet Street define the area directly north of the site. City-owned, uncleared and undeveloped property is located further northwest across Garnet Street.

South and West

- An active railroad line (Norfolk Southern Railroad, current) runs along the southwest boundary of the property. The site is elongated and ends at a point such that there is no defined southern boundary edge.

Current Uses of Surrounding/Vicinity Properties

Figure 2 depicts select surrounding/vicinity properties. The subject property is bordered on all sides by railroad tracks except for its northernmost boundary, where it is adjacent to the corner of East Lynch Street and Garnet Street and City-owned parcels. Beyond the railroad that lies along the subject property's northern tip of the northeast boundary is property that had been owned by the former Lynchburg Foundry Company but is currently owned by a private owner, and foundry buildings still exist on the site. The property northeast of the railroad tracks and subject property is currently owned by the City of Lynchburg, and evidence of demolition of the former foundry is still on site. The property now includes cleared land with some remaining rubble and a fenced area that appears to be used for storage. The James River is to the northeast of the former foundry property. Southwest of the railroad and subject property are parcels owned by the City of Lynchburg and private owners. The properties immediately adjacent to the railroad tracks are undeveloped land, some of which are cleared but most of which are still forested, and which are zoned for heavy industrial. Residential properties are adjacent to the heavy industrial-zoned properties. Past the City-owned parcels to the northwest of the subject property are commercial properties and downtown Lynchburg, the edge of which

is within 0.5 miles from the subject property. Potential RECs associated with current and former uses of adjoining and surrounding properties (if any) are identified and discussed in **Section 4.0**.

3.0 USER PROVIDED INFORMATION AND SITE DETAILS

The City of Lynchburg is the current User of this Phase I ESA. Ms. Marjette Upshur, Director, City of Lynchburg Office of Economic Development and Tourism, representative for the City and Brownfields Grantee representative, was asked to complete the User Questionnaire adapted from ASTM 1527-13. A response was not received at the time this assessment was completed. Information received from the User along with information obtained from records research is included below.

3.1 Ownership Record Review

The City of Lynchburg has owned the property since 2009. Based on Lynchburg's ParcelViewer, the previous owner prior to the City of Lynchburg was Jonathan B. Schewel, and prior to Mr. Schewel, the following entities had owned the property (in order from most recent to earliest ownership): Lynchburg Foundry Company, Mead Corporation, Woodward Iron Company, and Lynchburg Foundry.

3.2 Environmental Liens or Activity and Land Use Limitations

An environmental lien search is not implied nor performed by Draper Aden Associates as part of this assessment. Based on information reviewed as part of this assessment and interviews with local government employees, no environmental liens or activity and use limitations (AULs) were found.

3.3 Specialized Knowledge

The City indicated limited specific knowledge regarding former site use. Information regarding property boundaries was provided by City personnel.

3.4 Commonly Known or Reasonably Ascertainable Information

No additional documents or information was provided to Draper Aden Associates regarding RECs in connection with the subject property.

3.5 Valuation Reduction for Environmental Issues

The value of a property is based on current fair market value. The role of the Phase I ESA is to provide information regarding RECs that may be used in the determination of fair market value. There is the potential that discovery of historical environmental issues, conditions or liens, or other RECs during this Phase I ESA could affect the value of the property. The property is not on the market.

3.6 Owner, Occupant, Key Site Manager/Property Manager Information

The City of Lynchburg is the recorded property owner. Interview with the key site manager is provided in **Section 6**.

3.7 Reason for Performing a Phase I Review

Reasons for performing the Phase I ESA are as noted below.

- The Lynchburg EDA desires to redevelop the brownfield to a property that will encourage new investment, attract and retain workers, and restore the historic charm of the area.
- To facilitate sale and/or development of the subject property.
- To qualify for landowner liability protections, that being the practice that constitutes "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" [42 USC §9601(35)(B) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)], if applicable.

The User ultimately intends to use the results of the Phase I ESA to facilitate development of the subject property.

4.0 RECORDS REVIEW

4.1 Standard Environmental Review

Draper Aden Associates contracted with EDR to complete the regulatory database search and to assist parties seeking to meet the record search requirements of the ASTM standard. The ASTM-defined minimum search distances were used in evaluation of the subject property. The EDR *Radius Map Report with GeoCheck* is presented in **Appendix C**. Upon review of the EDR report, Draper Aden Associates identified and summarized the following information pertaining to the subject property, adjacent and off-site properties, and unmappable orphan properties.

Subject Property

The subject property was not listed in any of the regulatory databases searched by EDR. See also the discussion regarding the Lynchburg Foundry complex under vicinity properties.

Adjacent Properties

No adjacent properties were identified in the regulatory databases searched by EDR based on mapping. However, the CSO railroad was identified on the Leaking Underground Storage Tank (LUST/LTANKS) database. The description of the incident is identified as adjacent to 1800 Garnet Street. The listing, PC 2010-2214 is listed as closed. Additional information regarding this incident was requested from VDEQ and summarized below, Section 4.2.

Vicinity Properties

The subject property was previously part of the larger Lynchburg Foundry complex. Currently, the bulk remainder of that property is located to the north and northeast of the site opposite the CSX railroad tracks (**Figures 2** and **3**). The foundry property is listed on the Leaking UST, UST/AST storage, SEMS-Archive, RCRA-TSDF, and the RCRA NonGen/NLR databases. Foundry operations have ceased, and the majority of the property near the subject property has been cleared. The majority of the foundry property is located downgradient of the site with respect to groundwater and surface water flows with the James River acting as a major influencer of groundwater movement in that area. A release from within the foundry property north of the CSX railroad is not anticipated to have impacted the subject property.

The EDR report identified one (1) incident associated with the CSX Railroad with a listed address of 2151 Concord Turnpike; however, information related to the release locates the incident within the CSX right of way adjacent to the subject property. Additional files were requested from VDEQ discussed in Section 4.2, "Other Records Review".

The EDR report identified seven (7) additional properties within the ASTM-defined minimum search distances that appeared in multiple regulatory databases. (An additional LUST site (Coastal Mart, Map ID 5, was identified based on mapping, but is improperly mapped and is not actually located near the subject property.) Of the remaining seven, the RockTenn company (now Westrock) is located cross-gradient with respect to groundwater flow and topographically downgradient with respect to surface flow. Based on this and the distance between the two properties, a release from this facility is not expected to impact the subject property.

The remaining six (6) properties are listed on the leaking UST database in the below table. A summary of the properties' distance, direction, and relative elevation from the subject property, as well as the databases in which the properties were found, are listed in the below table. The Map ID that is referenced in the EDR Radius Report is included in the below table for reference in both this report and the EDR Radius Report in **Appendix C**.

Property (Map ID)	Distance, Direction, and Elevation from Subject Property (miles)	Database Reference	Status	Databases
Non-responsive based on revised scope.) Non-responsive based on revised scope.) Non-responsive based on revised scope. Non-responsive based on revised scope.	0.236, South, Higher	PC 2014-2321	Closed	LTANKS
	0.288, South/Southwest, Higher	PC 00-2055N	Closed	LUST, LTANKS
Hill Top Homes LLC (D14)	0.432, West/Southwest, Higher	PC 2011-2118	Closed	LUST, LTANKS
Lynchburg Redevelopment and Housing (15)	0.443, Southwest, Higher	PC 1993-2093	Closed	LUST, LTANKS, UST
Grace Street Fire Station (D16, 18)	0.461, West/Southwest, Higher	PC 1992-1233	Closed	LUST, LTANKS, UST
Former Trinity Methodist Church (D17)	0.468, West/Southwest, Higher	PC 2009-2034	Closed	LUST, LTANKS

Multiple additional properties are listed within the regulatory search distances established in ASTM 1527-13 but would most likely not have any specific environmental impacts on the subject property. Properties that are lower in elevation than the subject property (such as the foundry) are considered hydrologically down-gradient from the subject property and are not anticipated to impact the subject property due to groundwater or surface water flow.

Those properties and incidences listed in the above table have the potential for contaminant migration toward the subject property. However, petroleum releases are all identified as closed by VDEQ. Based on the distance, status of each release, and relative nature of the releases (the nearest LUST listings are residential and anticipated to be a result of viscous heating oil) these sites are not considered RECs with the potential to impact the subject property. However, regulatory closure does not preclude that a site can be re-opened in the future if new information is identified.

No other vicinity properties were identified in the regulatory databases searched by EDR.

Orphan Sites

Unmappable orphan properties, those that have poor or inadequate address information, were also reviewed. Due to the limited information available for review, the minimum search distance for these orphan sites was limited to the site and adjoining properties. Two (2) orphan sites were listed in the LUST database: CSX Transportation on Jefferson St. and 10th St, and VDOT in Madison Heights, VA. Madison Heights, VA, is across the James River; therefore, the VDOT site does not pose an environmental risk. The intersection provided for CSX Transportation is outside the ASTM search distance of the subject property; further discussion of the railroad industry is included in **Section 4.4.2**, Historical Use – Adjacent Properties.

4.1.1 Activity and Use Limitations (AULs)

The EDR Environmental Lien and AUL Search (**Appendix C**) provided no indication of AULs as defined by ASTM 3.3.1 for the subject property. Local government officials did not indicate knowledge of any AULs for the property since purchase (**Section 6.2**).

The site building serves as a retaining structure for the railroad track located south of the site. Documents reviewed indicated that the southern building edge serves as the boundary between the site and railroad.

4.2 Other Records Review

A Freedom of Information Act (FOIA) request was submitted to VDEQ March 18, 2020 for information related to the subject property and to identify if files exist for adjacent and nearby properties. No files for the site were available from VDEQ. However, a pollution complaint (PC #2010-2241) was filed May 20, 2010, for a free phase petroleum release in a utility excavation on CSX property adjacent to and northeast of the subject property, approximately 100 feet southeast of the southeastern edge of the warehouse building on the subject property. The source was not confirmed, but potential sources of petroleum were cited in a Site Characterization Report (source) prepared for the incident. The potential sources identified in the SCR include a possible release from former ASTs on the southwest side of the warehouse building (see Section 4.4.1), or a pinched pipeline possibly located on the subject property due to a recent utility project that might have connected the ASTs at the warehouse building to a 20,000 UST on former Lynchburg Foundry property southeast of the subject property. Either sources could potentially have resulted in impact to the subject property.

Soil and air sampling were conducted as part of initial abatement activities in 2010, soil and groundwater samples were evaluated as part of subsequent site characterization, and groundwater monitoring was conducted for four quarters following site characterization on the adjacent property. Soil sampling revealed benzo(a)pyrene levels greater than VDEQ Voluntary Remediation Program (VRP) based Tier III Screening Levels in place at that time for

Commercial/Industrial properties (0.49 mg/kg vs 0.21 mg/kg) and Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO) greater than VDEQ definitions of fuel oil saturation (13,000 mg/kg vs. 12,000 mg/kg). An air sample of trench gases was collected during initial abatement, and Semi-Volatile Organic Compounds (SVOCs) and VOCs were not detected. Ambient air monitoring was conducted using a photoionization detector (PID) during site work and throughout construction operations. The pollutant complaint was closed by VDEQ on February 16, 2012, and the VDEQ closure letter stated that vapors no longer appear to be a risk. Groundwater results monitored over four quarters indicate the presence of naphthalene greater than the Tier III screening level for a worker safety if in contact with the aquifer (last reading of 2.3-5.6 ug/L vs. 0.796 ug/L). A groundwater sampling event associated with site characterization noted groundwater results where 2-methylnaphthalene, in addition to naphthalene, was reported to be greater than the VRP Tier III screening level for construction workers in a trench (210 mg/L vs. 58.83 mg/L for 2-methylnaphthalene, 4.8 mg/L vs. 0.80 mg/L for naphthalene)). Naphthalene and 2-methylnaphthalene were also observed in soil samples, but at concentrations less than the VRP-comparative screening levels. In summary, a suite of VOCs and SVOCs were observed in soil and groundwater on the adjacent property and believed to be the result of a release of degraded diesel fuel. Groundwater elevations measurements from this incident indicate that groundwater should flow southeast, away from the current subject property.

Though an attempt to remove free product was made, not all material was removed. Nonetheless, the PC was closed by VDEQ based on soil vapor, groundwater results, and evaluation of potential risk to nearby receptors. It was noted that land adjacent to this incident may be impacted, and the Site Characterization Report recommends "that adjacent property owners evaluate potential petroleum sources on their respective property" (AECOM, 2010). The Initial Abatement Report, Site Characterization Report, and pollution complaint closure letter have been included in **Appendix C**. This closed pollution complaint is considered a REC based on the proximity of the incident to the subject property, the possibility that the petroleum source may originate on the subject property, and the existence of residual impact after closure of the complaint may impact the subject property.

4.3 Physical Setting Sources

In accordance with ASTM E1527-13, a current U.S. Geologic Survey (USGS) 7.5-minute topographic quadrangle map was used to identify general site conditions and topography. To better evaluate the site relative to environmental conditions, a Soil Survey of the subject property, a geologic map of the area, and flood maps were also reviewed to evaluate the physical setting of the subject site and vicinity as described below.

4.3.1 Topographic and Flood Map Review

According to the 2019 USGS Lynchburg, Virginia, 7.5-minute topographic quadrangle maps (**Appendix C**), the subject property is situated at approximately 520 feet above mean sea level.

The topography of the subject property slopes downward to the northeast towards the adjacent property CSX railroad tracks on the subject property's northeast border. Topography in the area continues to slope to the north-northeast toward the James River.

Storm water likely flows along the topographic gradient and flows northeast towards the CSX railroad tracks at the northeast boundary of the subject property. Surface and stormwater likely infiltrate the surface as sheet flow. A FEMA FIRMette (**Appendix C**) including Flood Map numbers 5100930042D, 51009C0395B, and 5100930044D shows that the subject property is within the hazard area where a 0.2% annual chance of flooding can occur. The EDR Radius Map report, which includes a physical setting source summary, confirms this assessment.

4.3.2 Regional and Local Geology

The subject property is located within the Piedmont Physiographic province of Virginia, which includes broad rolling hills and moderate slopes. According to the Virginia Division of Mineral Resources' Publication 174, the subject property sits on the Ashe Formation with a primary rock type of biotite gneiss. These formations tend to consist of biotite schist and gneiss, feldspar, quartz, and granitic clasts with local occurrences of quartzite, impure marble, calcareous gneiss, and amphibolite. These rock types do not indicate karst features. The geology of the property can also be characterized as Alluvium according to *Geology and Mineral Resources of the Lynchburg Qudrangle, Virginia* (**Appendix C**). Alluvium is unconsolidated materials typically deposited by a body of running water. The James River is approximately 500 feet to the northeast of the subject property, and flooding could result in Alluvium deposits at the site. The composition of alluvium is typically indeterminate; however, given the geology of the surrounding area and the lack of karst features in the area, soluble rocks are not likely present.

Assumed groundwater flow beneath the subject property is northeast towards the CSX railroad tracks. This general characterization of groundwater flow is based on an assumption of relatively simple subsurface aquifer conditions and that the James River acts as a primary control of local groundwater flow. Facilities located northeast of the subject property are lower in elevation and are therefore considered unlikely to have an impact on the subject property. Facilities located cross-gradient to the site are also not likely to result in migration toward the subject property. Groundwater flowing from properties northwest of the subject property may impact the property because these adjacent and vicinity properties are at higher elevations and groundwater likely flows to the James River.

4.3.3 USDA Soil Survey

The site soils underlying the subject property are identified as Tallapoosa loam and Urban Land. The warehouse building sits atop primarily Tallapoosa loam, and the remaining undeveloped land is categorized as Urban Land. Tallapoosa loam is primarily derived from residuum weathered from mica schist, is well-drained, and has moderate permeability. Runoff from this soil type is medium to rapid. The Urban Land map unit indicates that the original soils have been

disturbed and that buildings and/or pavement cover a significant portion of the land. (USDA NRCS Web Soil Survey).
A NRCS soil map of 1800 Garnet St and descriptions of each soil type are presented in **Appendix C**. The potential for fill cannot be eliminated and may alter subsurface migration via water or vapor.

4.4 Historical Use Information

The historical site use as described below was based on review of information presented in the various practicably reviewable and reasonably ascertainable historical resources evaluated and referenced in **Section 9.0** and located in **Appendix B**, including aerial photographs dated 1947 through 2016, historical topographic maps dated 1892 through 2013, Sanborn maps dated 1890 to 1973, and city directories dated 1964 through 2014. Interviews conducted during this assessment were also used to assist in the understanding of previous uses of the subject property and surrounding area. Additionally, the site is listed on the state registry of historic places (Department of Historic Resources (DHR ID 118-5181). The site is identified as eligible for listing on the National Register of Historic Place (NRHP) though it has not formally been listed. It is also located within a historic district identified as DHR118-5507. Identification does not indicate environmental conditions but may provide information regarding former site use and could affect future site modifications and or the ability to assess the site if Phase II environmental testing is pursued.

In some instances, sources could not be identified at 5-year increments as required by the ASTM 1527-13 standard. This represents a data gap since site-specific development/use could not be confirmed over these time periods based on historical documents available and the verbal history obtained during interviews. However, this data gap is not considered to be significant based on the available information reviewed. In addition, some of the property boundaries marked by EDR on historical maps deviated from the actual property location due to inaccuracies in scale of the historical maps. The historical maps were still used, and professional judgment was applied to account for these discrepancies.

4.4.1 Historical Use - Subject Property

The following historical use summary for the subject property is based on information referenced in the following table and as noted above, as well as information from a site reconnaissance discussed in **Section 5.0**.

Summary of Subject Property Historical Use

Year (Source)	Use
1890 (Sanborn Maps)	A dwelling appears partially within the northern end of the subject property. Subject property otherwise undeveloped.
1892*, 1944, 1963, 1968, 1978, 1984, 1986, 2013 (Historical Topo Maps)	No indications of buildings on subject property, railroad present.
1902 (Sanborn Maps)	A warehouse exists on the northern end of the subject property with a bridge connecting the warehouse to nearby foundry buildings (note these foundry buildings are situated off-site relative to current parcel.
1907 (Sanborn Maps)	Three separate, additional buildings (one marked as "dry storage") exist on the property southeast of the warehouse building.
1947, 1955*, 1959, 1960, 2000 (Aerial Photos)	Map resolution too poor to confirm property development/use.
1948 (Deed)	Deed in Book 353, Page 490, describes the boundary of the property conveyed by Southern Railway Company to Lynchburg Foundry Company, which does not illustrate tanks on the southern side of the warehouse building depicted in Drawing A-10220 that accompanied this deed.
1951*, 1955 (Sanborn Maps)	Main warehouse redeveloped using fireproof construction and brick walls and expanded to include a garage, washroom, office space, and two elevators. Oil tanks shown on the southern side of the warehouse building. Three separate buildings in 1907 Sanborn are combined and designated pattern storage, lockers, and bath house.
1961 (Deed)	Plat of property from the deed in Book 357, Page 397, indicates the southwest boundary of the property runs along the main southern wall of the warehouse (not including the southern extension of the building, see **Appendix A**) and does not appear to include oil tanks on the southern side of the warehouse building.
1965, 1967 (Sanborn Maps)	Pattern storage building in three-building cluster separate from the warehouse building converted to locker rooms, and cluster extended to include boiler room and electrical switch house.
1971 (Sanborn Maps)	Three-building cluster are connected to main warehouse.
1977* (Aerial Photos)	Rectangular shape possibly indicating presence of building seen in photo.
1964, 1969, 1974, 1979, 1984, 1988, 1993 (City Directory)	Address 1800 Garnet St not listed in City Directories.
1982, 1994 (Aerial Photos)	Building on subject property is seen in photo with bridge between the subject property building and Foundry buildings on the opposite side of the railroad.
1998 (City Directory)	Printing and writing company Raven Enterprises is listed at 1800 Garnet St.
2000 (City Directory)	C&C Cleaning Service Inc. and Jordan Construction listed at 1800 Garnet St.

2004 (Building Permit Report)	Malik Shabazz was granted a "Change of Occupant" commercial permit associated with subject property's address.
2005 (City Directory)	Petemont Newspaper, Sonship Graphics Inc., Gunn Claude, and Operation Turnaround-Western Region listed at 1800 Garnet St. C&C Cleaning Service Inc listed at 1800 Garnet St., Ste 204. Gunn Claude and Operation Turnaround Wstn Reg also listed on the cross street in addition to the target street with the same address of 1800 Garnet St.
2006 (Aerial Photo)	Building on subject property still present, bridge between subject property building and foundry buildings no longer present because foundry buildings are no longer there.
2006 (Building Permit Report)	AA 7 Hills Cab Co. was granted a "Change of Occupant" commercial permit associated with subject property's address.
2009 (Aerial Photo)	Building on subject property appears longer than building seen during site reconnaissance.
2010 (City Directory)	Hill City Renaissance Center and Operation Turnaround-Western Region listed at 1800 Garnet St. C&C Cleaning Service Inc listed at 1800 Garnet St., Ste 204.
2013 (Marked 1961 plat from City of Lynchburg)	Boundaries marked in green by Mr. Boyer in 2013 delineate the most current boundaries for the subject property and surrounding properties. The northern and southern extensions of the building are not included in the subject property's boundary.
2014 (City Directory)	Hill City Renaissance Center listed at 1800 Garnet St. C&C Cleaning Service Inc listed at 1800 Garnet St., Ste 204.
2012, 2016 (Aerial Photos)	Building on subject property appears to be the same length as what was observed during site reconnaissance.

* Note: The location of subject property's boundary depicted on the map is most likely incorrect relative to the map.

** Note: The following maps were not used due to quality issues including unmapped areas, poor resolution, or cloud/tree cover obstructions: 1970 Historical Topo Map, 1969 Aerial Photo, 1991 Aerial Photo

The current building on the subject property appears to contain materials originating from the 1950s and potentially 1900s, which would suggest that asbestos and lead-based paint likely exist in the building. Oil tanks were added to the 1951 Sanborn maps located on the southeast end of the building; these oils tanks were located on railroad property according to the 1948 deed for the subject property and will therefore be discussed in **Section 4.4.2**. An electrical switch house was added by the 1965 Sanborn map, and this building was shown as being combined with the main warehouse building in the 1972 Sanborn Map. The current warehouse building may therefore contain electrical equipment that may contain PCB oils given the year the electrical switch house was built. A cleaning service appeared to have occupied the building for at least five years in the early 2000s. Solvents and chemicals associated with the cleaning services may be an environmental hazard. An interview with Mr. Kirt Chappelle of City of Lynchburg's Public Works Department did not confirm whether this service was located in the building, and no reports were identified in the EDR regulatory database searches concerning spilled chemicals. The environmental risk present due to this cleaning service appears low.

As noted previously, the building is identified on the state's historic registry (DHR ID 118-5181). Information available from the Virginia Department of Historic Resources (DHR) identify the building as part of the former Lynchburg Plow and Foundry Company) and show a date of construction of around 1919. The building is also part of a historic district (DHR ID 118-5507) due to its contribution to the overall history within this industrial area. Information available through DHR supports our general understanding of the site history as described above as it relates to the origin and former use of the building.

Although not an environmental concern, current property boundaries, which omit the southern extension of the building, may require coordination with Norfolk Southern Railroad in order to redevelop the building.

4.4.2 Historical Use - Adjacent Properties

The Norfolk Southern and CSX Railroads were the primary entities adjacent to the property from the 1800s to the present day. The following information summarizes historical adjacent property use. Select noted properties are identified on **Figure 2**.

North and East

The James River and Kanawha Canal parallels the northeast boundary of the subject property in the 1890 Sanborn map, and northeast of the canal is the C & O Railroad tracks. The canal appears to have been shortened in 1951 such that the adjacent property was now the C & O Railroad, and it disappeared entirely in the 1955 Sanborn map. An unnamed road immediately north of the property had also been constructed by 1902 and is currently named Garnet Street based on the site reconnaissance. Historical topographic maps and aerial photographs confirm the presence of the railroad. The railroad remains active under CSX Railroad based on the current CSX Railroad system map.

Activity from trains or other equipment supporting the railroad line may produce contaminants including petroleum and heavy metals, which may enter the subject property in the form of stormwater runoff, airborne particulates, or undocumented leaks and spills The railroad is identified as a REC due to its proximity to the subject property with no barriers between the railroad and subject property to obstruct impacts from hazardous substances or petroleum products.

South and West

The Virginia Midlands Railroad track already exists adjacent to the subject property in the 1890 Sanborn map and 1892 topographic map and becomes Southern Railroad by 1907 according to the associated Sanborn map. The track continues to be active under Norfolk Southern Railroad based on the current Norfolk Southern Railroad system map and site reconnaissance.

Based on a 1948 deed between the Southern Railway Company and the Lynchburg Foundry Company, the Foundry acquired a portion of subject property where the main building currently stands, but which did not include the building extension on the southern wall of the building. Oil tanks in the corner where the building extension meets the southern main wall on the southern end of the property first appeared in the 1951 Sanborn map and subsequent Sanborn maps. The oil tanks appear to be on railroad property based on descriptions of the property boundaries in the 1948 deed, a 1961 Plat of the Property of Lynchburg Foundry Co., the most recent deed from 2009 (EDR Lien and AUL Search), and the most current property boundaries provided by Mr. Boyer. The oil tanks are no longer present based on the site reconnaissance.

Activity from trains or other equipment supporting the railroad line may produce contaminants including petroleum and heavy metals, which may enter the subject property in the form of stormwater runoff or airborne particulates. A tree line between the subject property and the railroad seen in all historical aerial photographs would help retain surface water runoff containing contaminants. However, the site reconnaissance revealed that the tree line did not extend across the entire property, and this factor combined with the steepness of the topography from the railroad to the subject property suggests that contaminants, if any, are likely to migrate from the railroad property to the subject property (see Section 5.0 for more details). The railroad is therefore identified as a REC due to its proximity and potential for likely impact to the subject property and despite having some vegetative barrier.

The presence of oil tanks reveals a potential source for petroleum impact, if identified. The tanks are no longer present and no obvious spills were observed during the site reconnaissance. However, petroleum releases are known in this area as discussed in Section 4.2 and these tanks were identified as a potential contributing factor.

Finally, the 1948 deed, a 1961 Plat of the Property of Lynchburg Foundry Co., the 2009 deed, and the most current property boundaries provided by Mr. Boyer, indicate that the building extension along the southern wall of the building is on railroad property. Although not an environmental concern, the redevelopment of the subject property may require coordination with the railroad if the building extension required modification.

4.4.3 Historical Use – Vicinity Properties

Based on historical topographic maps, aerial photographs, and tax parcel information, residential area was developed and expanded west and south of the subject property while industry expanded on the north and east of the subject property. A few commercial businesses also were developed, primarily northwest of the subject property. Select noted properties are identified on **Figure 2**.

North

Vicinity properties north of the subject property historically included industrial activity. Sanborn maps from 1890 show the Baltimore United Oil Company, J.H. Kinnier Coal, Wood, and Ice

Company, and Lynchburg Spoke Works already in existence north of the canal and railroad tracks. Oil tanks and coal sheds were associated with some of these industries, and petroleum products and coal particulates could pose an environmental hazard if spillage occurred for which no regulatory oversight existed at the time. A lumber company came into existence north of the subject property following the coal company.

The Lynchburg Foundry eventually expanded to all of the vicinity properties north of the subject property. Foundry activity is associated with air pollutants such as benzene and hazardous waste products that can include heavy metals, cyanides and phenolics. The foundry property also included a blacksmith area, chemical engine, and laboratory with associated hazardous contaminants. Liquid and solid waste should not impact the subject property as the subject property is up-gradient from these vicinity properties. Historical aerial photographs show that no physical or vegetative barriers would have prevented airborne particulates from migrating to the property, and historical topographic maps and aerial photographs suggest that there was direct line of site between the subject property and northern vicinity properties, which was confirmed during site reconnaissance. There is a potential for residual air particulates on the subject property from these off-site sources. Regulatory databases do not indicate any environmental concerns for these off-site properties; however, these databases do not extend beyond recent years.

East:

A foundry was located northeast of the canal and railroad tracks east of the subject property in the 1902 Sanborn map, and foundry activities expanded over multiple years. Based on 1902 to 1973 Sanborn maps, the foundry expanded to include a machine shop, machine repair shop, coke bins and shed, and cupola furnaces. These activities may have associated contaminants such as solvents, petroleum, coke waste, and air pollutants including metals and semi-volatile and volatile organic compounds. Liquid and solid waste should not impact the subject property as the subject property is up-gradient from these vicinity properties. Historical aerial photographs show that no physical or vegetative barriers would have prevented airborne particulates from migrating to the subject property, and historical topo and aerial maps suggest that there was direct line of site between the subject property and northern vicinity properties, which was confirmed during site reconnaissance. There is a potential for residual air particulates on the subject property from these off-site sources. Regulatory databases do not indicate any environmental concerns for these off-site properties; however, these databases do not extend beyond recent years.

South

The southern vicinity of the subject property was residential neighborhoods based on Sanborn maps covering a period from 1890 to 1973. Aerial maps covering a period from 1947 to 2016 confirm this observation. No gas tanks on residential property were observed on the Sanborn maps; however, the EDR Radius report shows 6 properties that are either south or southwest of the subject property and within ½ mile of the property that have reported leaking tanks. These

properties and their associated environmental risks are discussed in **Section 4.1**. The Rock-Tenn Company is located southeast of the subject property and is a paper mill. Historical maps do not provide much detail about this property except for its presence observed on the 1963 topographic map and possibly in a 1955 aerial photograph. This vicinity property does show up in regulatory databases and is discussed in **Section 4.1**.

West

The western vicinity of the subject property was primarily residential neighborhood based on Sanborn maps covering a period from 1890 to 1973. An electrical substation was constructed approximately 300 feet west of the subject property by 1967 based on the associated Sanborn map and appears to still be active based on the site reconnaissance. Because PCBs had not been banned at the time of its construction, the electrical substation might pose an environmental risk. The Norfolk Southern Railroad track is located between the electrical substation and the subject property and may therefore obstruct surface runoff. Further discussion of this site can be found in **Section 5.7**. A garage that appears to have been associated with a vacant lot and a restaurant had also been located west of the subject property based on Sanborn maps. Given that no tanks or spillage were indicated for these two properties in Sanborn maps and regulatory databases, respectively, these properties do not pose an environmental risk to the subject property based on available information at this time.

5.0 SITE RECONNAISSANCE

Draper Aden Associates performed the Phase I ESA site reconnaissance on January 15, 2020. The assessed subject property and adjoining properties observed from the property boundary are depicted in **Figure 2**. Representative photographs of the subject property are presented in **Appendix A**.

5.1 Methodology and Limiting Conditions

Methodology: Field observations were documented systematically. Because of its narrow shape, field personnel observed the property by walking from the northern end where the building is located to the southern end and returning along the same path. Field personnel then assessed the building starting with the main floor and moving up to the fourth floor, then back down to the lower basement level. After completing observations on the subject property, field personnel observed conditions at adjacent properties from the right-of-way or property line.

Limiting Conditions: A portion of the subject property was overgrown with vegetation (primarily along steep slopes) and not all areas could be observed in their entirety. The southern boundary of the property was overgrown with shrubs and trees, which made portions of this boundary inaccessible and obscured views of the railroad tracks immediately adjacent to the property (the tree line did not extend between the building and the railroad tracks). The narrow strip of land south of the warehouse building was covered with grass, which could obscure spill marks, and precipitation had recently occurred in the area, which may also obscure signs of spills. Within the building, debris obscured a majority of the floor, and limited light sources on certain floors, particularly the main and lower basement floors, prevented a thorough observation of rooms.

5.2 General Site Setting

Areas not covered by the building appeared to be cleared land with grass cover and with trees bordering the southern boundary of this area, which obscured the railroad tracks adjacent to this section of property. The warehouse building occupies the northern third of the property, and the rail lines north and south of the building could be seen directly from the building.

The building was accessed from a locked door on Garnet Street. However, exterior damage to doors and windows allow for improper access to the building. The site is accessible from Garnet street and no fencing or other barriers are present.

5.3 Exterior Observations

5.3.1 Chemical Storage Areas (excluding storage tanks and drums)

No exterior chemical storage areas were observed.

5.3.2 Underground or Aboveground Storage Tanks

No ASTs or USTs were observed. No vent pipes, fill pipes or access ways indicating the presence of a UST were observed. Former ASTs associated with the building appear to be located on property owned by the Norfolk Southern railroad and is considered adjacent property.

5.3.3 Odors

No strong, pungent or noxious odors were noted.

5.3.4 Pools of Liquid

Pools of liquid discolored with green algae was observed on the property; however, this liquid was most likely collected stormwater. No odor or petroleum sheen was observed.

5.3.5 Drums

No drums were observed on the subject property.

5.3.6 Polychlorinated Biphenyls (PCBs)

No transformers or other features potentially containing PCBs were observed. On-site circuit breakers were observed that may have formerly connected to transformers.

5.3.7 Subsurface Structures (excluding storage tanks, wells and septic systems)

No subsurface structures were observed onsite.

5.3.8 Waste Disposal Areas

No designated waste disposal areas were observed. No indication of improper disposal (e.g., mounded or disturbed soil) was observed on site.

5.3.9 Pits, Ponds, or Lagoons

No pits, ponds or lagoons were observed.

5.3.10 Stained Soil or Pavement

No obvious stained soil or pavement was observed.

5.3.11 Staining or Corrosion

Staining was observed on the external façade of the building but may be due to precipitation or exterior modifications.

5.3.12 Stressed Vegetation

No stressed vegetation was observed; however, based on the time of year that the reconnaissance was conducted, vegetation is generally dormant, limiting the ability to assess the current status of vegetation around the building.

5.3.13 Wells and Septic Tanks

No wells or septic tanks were observed.

5.4 Interior Observations

The building was accessed from Garnet Street. Elevators and stairs are present, allowing access to all levels. Discarded household debris and evidence of prior usage was observed throughout. The upper levels were partitioned into separate rooms. Damage to flooring, interior wall features, and some exposed piping was observed.

5.4.1 Chemical Storage Areas (excluding storage tanks and drums)

A shelf on the main floor had containers that appeared to be paint cans and smaller plastic storage bottles. Contents are unknown. On the fourth floor, shelves labeled "Laboratory" were observed, but no containers appeared to be present on the shelves. Shelving was also observed in the lower basement level, but no chemical storage was observed at the time of the site reconnaissance.

5.4.2 Underground or Aboveground Storage Tanks

No ASTs or USTs were observed. No vent pipes, fill pipes or access ways indicating the presence of a UST were observed.

5.4.3 Odors

No strong, pungent or noxious odors were noted.

5.4.4 Pools of Liquid

No pools of liquid were observed on the property.

5.4.5 Drums

No drums were observed on the subject property.

5.4.6 Polychlorinated Biphenyls (PCBs)

No transformers were observed. Some interior electrical panels were observed, and two elevators were observed, which may contain PCBs if they were operated using hydraulics, which historically contained PCBs.

5.4.7 Subsurface Structures (excluding storage tanks, wells and septic systems)

No subsurface structures were observed onsite. Open floor grates of unknown use were observed on the main level.

5.4.8 Waste Disposal Areas

No designated waste disposal areas were observed. No indication of improper disposal (e.g., mounded or disturbed soil) was observed on site; however, debris and discarded items covered most of the floor. Discarded items included floor tiles, ceiling tiles, light ballasts, computer monitors, computer parts, wires, papers, furniture, and food and liquid containers.

5.4.9 Staining or Corrosion

De Minimis staining was observed on flooring within the building.

5.5 Asbestos-Containing Materials (ACM) and Lead-Based Paint (LBP)

An ACM and LPB survey is being performed and will be provided under separate cover.

5.6 Adjacent Properties

The conditions of adjacent properties were observed from the subject property boundaries and public right-of-way. The properties surrounding the subject property are as noted in **Section 2.5**. The Norfolk Southern Railroad track borders the subject property on the southwest boundary of the property, and the CSX Railroad track borders the subject property on the northeast boundary of the property (**Appendix A**).

A portion of the building extension on the southern side of the building, including an area of likely former petroleum storage (ASTs), is located on property owned by the Norfolk Southern railroad.
The Norfolk Southern railroad track is immediately adjacent and up-gradient from the subject property; therefore, any contaminants in stormwater runoff would flow directly onto the subject property. A line of trees and vegetation runs along the southern boundary of the property

between the cleared land on the subject property and the railroad. However, the steepness of the slope from the railroad tracks to the subject property would not impede stormwater runoff except for very small storm events. In addition, the vegetation ends at the building on the subject property, and runoff can migrate onto the property near the building.

The CSX railroad track running along the northeast boundary of the subject property is slightly down-gradient from the subject property. However, given that the railroad track is immediately adjacent to the subject property, and no vegetative or physical barriers are between the tracks and subject property, it is possible that contaminants in stormwater and the air can migrate from the tracks onto the subject property given the proximity. Railroad activity along the northern boundary of the property and likely impact to the subject property is considered an REC.

No pits, ponds, lagoons, or pools of liquid were observed, and no other environmental issues were observed from the subject property boundaries or from the public right-of-way to indicate impact from the adjacent properties to the subject property. Oil tanks were stored on the adjacent property as described in **Section 4.4.2**, but no tanks or obvious indications of spills were observed on the southern side of the building. This corner of the building was littered with debris and old vegetation, however, which obscured the ground from visual view.

5.7 Vicinity Properties

As discussed in Section 4.4.3, an electrical substation was observed approximately 300 feet west of the subject property. The substation was constructed between 1965 and 1967 based on Sanborn maps from those years. Because PCBs had not been banned during this time frame, the electrical substation is upgradient from the subject property, and the topography suggests that runoff and groundwater can migrate from the electrical substation to the subject property, the subject property might receive PCB impact from the electrical substation. However, the Norfolk Southern Railroad track is located between the electrical substation and the subject property and may obstruct surface runoff. This vicinity property is considered a potential REC (i.e., not a REC), based on available information at this time.

An AST was also observed on former foundry property, and the EDR Radius Map reports that the AST is still active. However, the AST is down-gradient from the subject property and physical barriers including buildings would likely obstruct any contaminant migration from the AST to the subject property.

6.0 INTERVIEWS

Draper Aden Associates conducted interviews, provided questionnaires, and/or requested information from the current property owner and local government officials. Interview documentation is outlined below.

6.1 Current Property Owner

Draper Aden Associates e-mailed an ASTM-compliant User Questionnaire to Ms. Marjette Upshur, Director of the City of Lynchburg's Economic Development Authority, on February 12, 2020. Draper Aden Associates has not received a reply from Ms. Upshur at this time. However, sufficient data is available to determine environmental risks and RECs for the property, and the lack of a completed User Questionnaire has been noted as a data gap.

6.2 Local Government Officials, User, and Key Site Manager

Draper Aden Associates personnel talked with Lynchburg Public Works employee Kirt Chapelle during the site reconnaissance on January 15, 2020 at 10:00 am. Mr. Chapelle is a representative of the key site manager. During the conversation, Mr. Chapelle mentioned the following pertinent information:

- He is unaware of any specific chemicals or oil tanks that are or were present on the subject property.
- He is unaware of any spills, chemical releases, or environmental cleanups on the subject property.
- He mentioned that the police have mentioned reports of vandalism to the building on the subject property.

A follow-up conversation with Mr. Chapelle on February 27, 2020 at 3:00 pm to confirm some of comments he had made during the site reconnaissance provided the following information:

- Mr. Chapelle has worked for the City for the past 22 years and is the carpenter, locksmith, and building maintenance personnel for the City.
- The foundry had used the building as an administrative building up until the early 1990's.
- The southern extension of the building is part of the subject property.
- A church group had used the building for storage and possibly used the front of the building as an administrative office within the last 7 to 8 years. They left the building within the past 4 or 5 years.

After reviewing the City of Lynchburg's ParcelViewer, the 1948 deed of the property, a 1961 plat of the property, and the 2009 deed, the most current property boundaries provided by Mr. Boyer, the conclusion is that the southern extension of the building is on railroad property, not the subject property.

Draper Aden Associates personnel also talked with Assistant Fire Marshal Matt O'Daniel of the City of Lynchburg Fire Department on February 21, 2020, at 3:05 pm. During the phone conversation, Assistant Fire Marshal O'Daniel mentioned the following pertinent information:

- Assistant Fire Marshal O'Daniel has worked for the fire department for the past 19 years and handles tank removals and would therefore have the most relevant knowledge pertaining to this subject for the property.
- He is unaware of any incidents on the subject property or environmental studies conducted for the property.
- He said that, based on the fire department's reporting system, which covers incidents as early as 2010, there have been no inspections of the subject property, no tank removals, and no fire or EMS calls.
- He stated that a train derailment occurred less than one mile north of the property (near 10th Street), and crude oil spilled into and burned in the river.
- He was unaware of any spills or releases on adjacent properties that might have resulted in impact to the subject property.

Draper Aden Associates personnel talked with Mr. Steve Boyer, Land Use and Rehab Programs Manager, in the City of Lynchburg's Assessor's Office on March 3, 2020, at 8:15 am to clarify property boundaries for the subject property. During the phone conversation, Mr. Boyer mentioned the following pertinent information:

- Mr. Boyer e-mailed Draper Aden personnel the 1961 property plat with his delineations of several property boundaries including the subject property's boundaries (**Appendix C**). He said that subject property boundaries as marked on the provided plat is accurate to the best of his knowledge and given surveyor records and available documentation.
- He mentioned that the building extension on the southwest-facing wall of the building is on railroad property for the railroad adjacent to the southwest boundary of the property. He suspected that the extension had been used by the railroad as a loading dock and noted a railroad spur on the plat that was immediately adjacent to the building extension and no longer exists that supports his theory.
- He suspects that there is an easement on the railroad property but could not find any record of one.
- He noted on the plat that there had also been a building extension on the northeast-facing wall of the building, which had also been part of railroad property for the railroad adjacent to the northeast boundary of the property. He mentioned that the extension must have been demolished and noted the difference in paint colors on the northeast-facing wall to support his claim.

6.3 Past Property Owner

The previous property owner (prior to ownership by the Economic Development Authority of the City of Lynchburg) is Jonathan B. Schewel. An attempt was made to locate Mr. Schewel's contact information, but this information was not obtained. Sufficient historical resources are available for review, so this data gap is not considered significant at this time.

7.0 FINDINGS, OPINIONS, AND CONCLUSIONS

7.1 Findings, Opinions and Conclusions

The results of this assessment represent a review of current conditions based on reasonably ascertainable information and limited observations. A finding of a recognized environmental condition (as defined by the ASTM standard and detailed in the limitations section of this report) does not imply that an impact actually exists but that more information may be warranted.

Draper Aden Associates performed this Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 for the subject property at 1800 Garnet St. in Lynchburg, Virginia. Any exceptions to, or deviations from, this practice are described in **Section 8.0** of this report. This assessment has revealed no evidence of RECs in connection with the subject property except for the following:

7.1.1 Recognized Environmental Conditions

(Subject Property)

- RECs associated with known and likely petroleum and chemical use were identified. Regulatory records identified petroleum impact at off-site locations that may have originated from releases on or near the subject property. Based on the site's former association and use as part of the foundry, the potential for chemical storage or use on the subject property could not be eliminated. Evidence of chemical use was also present during the site reconnaissance, such as containers on a main floor shelf with unknown contents and shelves labeled "Laboratory" on the fourth floor but with no containers present on the shelves. An understanding of pre-regulatory historical practices of chemical use and disposal and the long-term use of the site as part of a foundry support likely undocumented releases or improper disposal through on site drains or other areas on site to have occurred. Based on the age of the building, materials used as part of its construction may also contain contaminants such as asbestos in floor and ceiling tiles, and PCBs in electrical components. Two elevators in the buildings may contain PCBs if they used hydraulic lifts. Additionally, the undeveloped areas of the site may include fill from unknown sources. No documented releases at the subject property were confirmed as part of this assessment.

- The presence and nature of releases on adjacent properties and vicinity properties (discussed below) support that a Vapor Encroachment Condition (VEC) exists for this site. Subsurface impact, if present from on or offsite sources, may also result in a vapor intrusion condition into the building with possible pathways through the elevator shaft, open grates, and possible damaged flooring.

(Adjacent and Vicinity Properties)

- A pollution complaint filed in 2010 of petroleum seepage on CSX property adjacent to and northeast of the subject property also indicates a REC on or adjacent to the subject property (noted above). Possible sources of the petroleum cited by the site characterization report include the former ASTs located on the southwest end of the warehouse building, and a pipe that may have connected the ASTs at the warehouse building to a 20,000 gallon UST on former Lynchburg Foundry property. Given the proximity of the release, potential sources of petroleum, and residual constituents of concern after regulatory closure, a REC exists from adjacent property. This pollution complaint was not considered an HREC due to the potential for impact to the subject property (as concluded in the 2010 site characterization report).

- In general, activity from the adjacent railroads can produce contaminants such as petroleum and heavy metals, which can migrate onto the subject property through stormwater runoff. Railroad activity along the southwest boundary of the subject property has existed for at least 130 years and occurs immediately adjacent to the subject property. Insufficient vegetative cover that would obstruct flow onto the property coupled with steep topography would result in the likely migration of airborne and stormwater contaminants onto the property, resulting in a REC. No documented releases were identified as part of this assessment.

- Railroad activity along the northeast boundary of the subject property has also existed for at least 130 years and was immediately adjacent to the subject property for a minimum of 69 years. Because of the proximity of railroad activity to the subject property, airborne and stormwater contaminants have the potential to migrate onto the subject property despite the railroad being down-gradient from the subject property. The railroad north of the subject property is therefore also a REC. No documented releases beyond the 2010 incident noted above that received regulatory closure were identified as part of this assessment.

7.1.2 Findings (not considered RECs)

The following additional areas of concern were identified during this assessment but are not considered RECs at this time.

- Pools of liquid discolored with green algae was observed on the property; however, this liquid was most likely collected stormwater. No odor or petroleum sheen were observed.

- Oil tanks located on the southern end of the subject property's building, but technically on railroad property, were seen on multiple Sanborn maps starting in 1951. Although no tanks or obvious spills were observed during the site reconnaisance, no recorded history

of tank management or incidents are available either, which means that potential impact from undocumented releases onto the subject property cannot be eliminated.

- An electrical substation located approximately 300 feet west and up-gradient to the subject property is still active and has existed since 1967. Given these factors, PCB impact from surface runoff or groundwater might migrate to the subject property, although surface runoff can be obstructed by the railroad track between the substation and subject property.
- Historical nearby foundry activity may have dispersed airborne pollutants onto the subject property. Due to the proximity of the foundry to the subject property and the known environmental contaminants produced by foundries, this source of environmental contaminants cannot be eliminated.
- Multiple properties located southwest of the subject property might pose environmental risks due to reported leaks in USTs or ASTs on the property, and because the property is up-gradient to the subject property. The potential for impact to the subject property from these off-site sources is low because the topography generally suggests that constituents of concern in groundwater would not flow towards the subject property, and vegetative and physical barriers would obstruct surface flow; however, the risk cannot be eliminated.
- Finally, although not an environmental concern, redevelopment of the subject property may require coordination with the railroad if the extension on the southern wall of the subject property building required modification as this portion of the building serves as a retaining feature and is partially on railroad property.
- Additional coordination with the Department of Historic Resources may also be required based on the sites listing on the state's historic register and potential eligibility on the National Register of Historic Places.
- The potential for mold, ACM, or LBP to be present exists. These environmental conditions are outside of the scope of the Phase I ESA but may affect redevelopment and site use. An ACM and LBP survey conducted as part of this Phase I ESA will be forwarded under separate cover

7.1.3 Historical Recognized Environmental Condition (HREC)

No HRECs, as defined by the ASTM Standard (see **Section 8.0**), were observed.

7.1.4 Controlled Recognized Environmental Condition (CREC)

No CRECs, as defined by the ASTM Standard (see **Section 8.0**), were observed.

7.1.5 *De Minimis* Conditions

Trash and debris were found in the building on the subject property during the site reconnaissance, and their past uses are unknown. Some De Minimis staining was observed on flooring.

7.2 Data Gaps

- Some portions of the property, particularly the southeast half of the property land, was overgrown with grass at the time of the site reconnaissance, and the ground could not be observed in their entirety. In addition, a line of trees extended along the southern boundary of the property from the middle of the property to the southeast tip, obstructing that portion of the property as well as the adjacent property. However, sufficient historical resources were available for review, so this data gap is not considered significant at this time.

- The site was observed using flashlights and natural lighting since the power is currently off at the site. Some areas of the building could not be fully observed due to these low lighting conditions. Additionally, areas of debris storage obscured observation of portions of the site. However, sufficient historical resources were available for review, so this data gap is not considered significant at this time.

- Draper Aden Associates did not receive an ASTM-compliant User Questionnaire from the current property owner. However, sufficient historical resources were available for review, so this data gap is not considered significant at this time.

- The contact information for the previous property owner could not be located. Sufficient historical resources were available for review, so this data gap is not considered significant at this time.

- In some instances, sources could not be identified at 5-year increments as required by the ASTM 1527-13 standard. However, the gathered information through database searches, maps, and interviews provide sufficient information and this data gap is not considered significant

8.0 LIMITATIONS AND EXCEPTIONS

Draper Aden Associates prepared this document in accordance with generally accepted standards of environmental practice, and in general accordance with the scope and limitations of the ASTM E1527-13: *Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process*. The conclusions presented in this report are professional opinions based on data described in this report, and are intended only for the purpose, site location, and project indicated. The conclusions presented in this report are based on the assumption that site conditions do not deviate from those observed during the study and described in this report. This report is not an exhaustive study of potential environmental impact at the site and should not be interpreted as such. An evaluation of subsurface soil and groundwater conditions, radon, wetlands assessment, or historical building evaluation was not performed as part of this assessment. Select ASTM definitions are provided below:

- *controlled recognized environmental condition (CREC)*—a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

- *historical recognized environmental condition (HREC)*—a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted.

- *de minimis condition*—a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis conditions are not recognized environmental conditions nor controlled recognized environmental conditions.

- *business environmental risk*—a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental

issues required to be investigated in a standard ASTM Phase I Environmental Site Assessment.

This report has been prepared for the subject property pursuant to an agreement with the EDA and is accurate to the best of Draper Aden Associates' knowledge and belief. This report is based, in part, on unverified information supplied to Draper Aden Associates by third-party sources. While efforts have been made to substantiate this third-party information, Draper Aden Associates cannot guarantee its completeness or accuracy.

It is the responsibility of the client to notify the appropriate federal, state and/or local government agencies of our findings, as may be required by law.

8.1 Scope of Services

Draper Aden Associates provides this Phase I ESA in accordance with our general Scope of Services for Environmental Site Assessments. This includes the Phase I ESA, which generally consists of historical data and regulatory agency file records. Interviews with the site owner/operator and state and/or local officials were conducted. A reconnaissance of the subject property was also conducted. On completion of this review, the data are evaluated and a written report prepared documenting the investigative activities. Findings and recommendations for additional assessment are included, if warranted. Subsurface or surface sampling, and asbestos, vapor intrusion, radon gas and lead-based paint evaluations are not conducted during the Phase I effort, unless specifically requested by the client.

8.2 Terms and Conditions

Draper Aden Associates has provided this Phase I ESA in accordance with the terms and conditions noted above.

8.3 User Reliance

The Phase I ESA is designed to assist the User, as defined by ASTM E1527-13, in developing information about the environmental conditions of a property. This Phase I ESA is site-specific and relates to the assessment of environmental conditions at the subject property only. No Phase I ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions.

8.4 Deviations

Draper Aden Associates conducted this ESA in general accordance with ASTM Practice E1527-13. Deviations from the standard practice are described, where necessary, within the report. Limiting conditions that are considered Data Gaps are listed in **Section 7.0**. Other identified limiting conditions are detailed in **Section 5.0**.

8.5 Additional Services

Draper Aden Associates is coordinating ACM and LBP evaluation of the site, which will be provided under separate cover.

9.0 REFERENCES

Site Visit: January 15, 2020
Karen M. Weber, Senior Project Geologist, Draper Aden Associates
Stephanie Houston, Design Engineer, Draper Aden Associates

References Cited:

1. AECOM (2010). *Site Characterization Report, PC #2010-2241*. AECOM Project No. 60159405, dated December 15, 2010.
2. AECOM (2012). *Fourth Quarterly Monitoring Report, PC #2010-2241*. AECOM Project No. 60159405, dated February 6, 2012.
3. AECOM Environment. *Initial Abatement Report, PC #2010-2241*. AECOM Project No. 60159405, dated July 22, 2010.
4. ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. 2013.
5. City of Lynchburg. ParcelViewer. https://mapviewer.lynchburgva.gov/ParcelViewer/. Accessed February 11, 2020.
6. Environmental Data Resources, Inc. (EDR). *Former Lynchburg Foundry Company, 1800 Garnet St., Lynchburg, VA 24604, Inquiry Number 5934819:*
   - *EDR Aerial Photo Decade Package, Inquiry Number 5934819.11S*. January 15, 2020.
   - *EDR Building Permit Report, Inquiry Number 5934819.8S*. January 15, 2020.
   - *EDR Certified Sanborn Map Report, Inquiry Number 5934819.3S*. January 14, 2020.
   - *EDR City Directory Image Report, Inquiry Number 5934819.5S*. January 17, 2020.
   - *EDR Environmental Lien and AUL Search, Inquiry Number 5934819.7S*. January 18, 2020.
   - *EDR Historical Topo Map Report, Inquiry Number 5934819.4S*. January 15, 2020.
   - *EDR Radius Map Report with GeoCheck, Inquiry Number 5934819.2S*. January 23, 2020.
7. Natural Resources Conservation Service (NRCS) Web Soil Survey, City of Lynchburg, Virginia. United States Department of Agriculture. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed February 12, 2020.
8. U.S. Geological Survey (USGS). Lynchburg Quadrangle, Virginia 7.5-Minute Series Topographic Quadrangle, Scale 1:24,000. 2019. Available online at https://viewer.nationalmap.gov/basic/?basemap=b1&category=histtopo,ustopo&title=Map%20View. Accessed February 12, 2020.
9. Virginia Department of Environmental Quality (2012). *Site Pollution Complaint Closure for: Lynchburg CSO at Garnet St., 2151 Concord Turnpike, Lynchburg, City of Lynchburg, Virginia, PC 2010-2241*. VDEQ: Lynchburg, VA.
10. Virginia Division of Geology and Mineral Resources. Interactive Geologic Map. https://www.dmme.virginia.gov/webmaps/DGMR/. Accessed January 8, 2020.
11. Brown, William R. 1958. *Bulletin 74: Geology and Mineral Resources of the Lynchburg Quadrangle, Virginia*. Charlottesville, VA: Virginia Department of Conservation and Development, Division of Mineral Resources.

Interviews:

- Kirt Chapelle, Carpenter/Locksmith/Building Maintenance, City of Lynchburg Department of Public Works, via site reconnaissance visit on January 15, 2020 and via telephone at 434-455-4439 on February 27, 2020, 3:00 pm.
- Mr. Matt O'Daniel, Assistant Fire Marshal City of Lynchburg Fire Department, via telephone at 434-455-3825 on March 3, 2020, 8:15 am.
- Mr. Steve Boyer, Land Use and Rehab Programs Manager of City of Lynchburg's Assessor's Office, via telephone at on March 3, 2020, at 8:15 am

10.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONALS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10(b) of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries, or have directly supervised the activities of the all appropriate inquiries, by Draper Aden Associates staff in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared by:

Name: Non-responsive based on revised scope. Design Engineer

Signature: Non-responsive based on revised scope.

Company: Draper Aden Associates
Address: 2206 South Main Street
City/State/Zip: Blacksburg, VA 24060-6600
Phone and Fax: (540) 552-0444, (540) 552-0291

Reviewed by:

Name: Non-responsive based on revised scope. P.G., Project Manager

Signature: Non-responsive based on revised scope.

Virginia Professional Geologist Certification and Number: VA PG 1782

Third Party Review:

Name: Non-responsive based on revised scope., Senior Program Manager

Signature: Non-responsive based on revised scope.